

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/977,297

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) ~~Receiver~~ A receiver for receiving optically transmitted signals, ~~with the receiver comprising~~ an optical/electrical converter, an electronic feedback filter and at least one eye monitor for determining ~~[[the]] a quality of [[the]] a transmission link, [[the]] an output of the at least one eye monitor being connected to [[the]] an input of the electronic feedback filter, wherein the eye monitor comprises:~~

first and second threshold-value decision elements for deciding a level of a data signal based on first and second threshold values which are set close to vertices of an eye opening of an eye diagram;

first and second signal comparators for determining pseudo-errors by comparing decided signals output by the threshold-value decision elements with a signal altered by pseudo-errors;

first and second integrators for integrating the pseudo-errors output by the first and second signal comparators to generate first and second internal control variables; and

first and second regulators which correct the first and second threshold values based on comparisons between the first and second internal control variables and first and second setpoint values, respectively.

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2. (Currently Amended) ~~Receiver~~ The receiver according to Claim 1, with wherein the receiver comprises two eye monitors, ~~[[the]]~~ outputs of which are connected to the inputs of a ~~DFE~~ the electronic feedback filter, the two eye monitors measuring the eye opening of the signal and outputting it as a parameter signal.

3. (Currently Amended) ~~High-speed~~ A high-speed eye monitor with comprising: first and second threshold-value decision elements, the for deciding a level of a data signal based on first and second threshold values ~~[[of]]~~ which are set close to ~~[[the]]~~ vertices of ~~[[the]]~~ an eye opening of an eye diagram; and thereby generate pseudo-errors, with

[[a]] first and second signal comparator comparators for determining pseudo-errors by comparing the correctly decided signal signals output by the threshold-value decision elements with [[the]] a signal altered by the pseudo-error, with pseudo-errors;

first and second integrators for adding integrating the pseudo-errors output by the first and second signal comparators to generate first and second internal control variables; and

first and second regulators which correct the first and second threshold values based on comparisons between the first and second internal control variables in comparison with and first and second setpoint values, respectively and with a output threshold values.

4. (Currently Amended) ~~High-speed~~ The high-speed eye monitor according to Claim 3, wherein the setpoint values ~~being~~ are superimposed by small-signal components.

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5. (Currently Amended) ~~High-speed~~ The high-speed eye monitor according to Claim 3, ~~[[the]]~~ results of ~~[[the]]~~ measurement of the eye opening and ~~[[the]]~~ a small-signal response ~~being~~ are used in the internal control variables for determination of the Q-factor.

6. (Currently Amended) ~~Method~~ A method for measuring the eye opening of an eye diagram, ~~consisting of the following steps~~ the method comprising:

[[·]] ~~Determination of the~~ determining garbled signal with two threshold values which correspond approximately to ~~[[the]]~~ vertices of the eye opening,

[[·]] ~~In each case, generation of~~ generating a data signal with pseudo-errors and ~~detection of the errors~~ detecting pseudo-errors through comparison with ~~[[the]]~~ a correct signal, and adding ~~[[of]]~~ the ~~errors~~ pseudo-errors through integration,

[[·]] ~~Comparison of~~ comparing each of the ~~pseudo-error rates~~ pseudo-errors with a setpoint value, and

[[·]] ~~Readjustment of the~~ readjusting deviating quantities and ~~output of the~~ generating a differential signal of the threshold values (~~eye edges~~) as a measurement value.

7. (Currently Amended) ~~Method~~ A method for determining a garbled signal, the method comprising:

[[·]] ~~Determination~~ determining the signal with a feedback filter which makes decisions on the basis of set threshold values and on the basis of an already determined ~~signals~~ signal,

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[[·]] ~~Determination of the~~ determining an eye opening of the signal with two eye monitors which determine [[the]] eye edges at [[the]] vertices of the signal and ~~supply the measurement~~ supplying a result to a feedback filter ~~the adaptive element (feedback filter)~~ as a parameter, and

[[·]] ~~Setting of~~ setting the threshold values of [[the]] threshold value decision elements in the feedback filter, the ~~parameters V_{eye_upper} and V_{eye_lower}~~ parameter being used for setting of the threshold values so that the signal is determined in the eye optimum.